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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,736	08/31/2001	Horst-Udo Hain	1454.1067	8402

21171 7590 12/27/2004

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WASHINGTON, DC 20005

EXAMINER
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AZAD, ABUL K

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/942,736

**Applicant(s)**

HAIN, HORST-UDO

**Examiner**

ABUL K. AZAD

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/31/01, 2/11/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1-18 are pending in this Office Action.

#### ***Specification***

2. The applicant fails to provide Section heading as required by 37 CFR 1.77(b).

Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if

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the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-27 of copending Application No. 09/942,735. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter are similar, however changing the language is obvious to one of ordinary skill in the art without any criticality.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 8-14 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al. (US 6,076,060).

As per claim 1, Lin teaches, “a method for speech synthesis by a grapheme/phoneme conversion”, comprising:

“searching for subwords of a given word in a database which contains phonetic transcriptions of words, the given word having a subword registered in the database, and a further constituent which is not registered in the database” (Fig. 3, elements 30, 31 and 32);

“selecting a phonetic transcription from the database for the subword” (Fig. 3, element 20);

“phonetically transcribing the further constituent of the given word with the aid of an out- of-vocabulary (OOV) treatment” (Fig. 3, element 32); and

“combining the phonetic transcription of the subword and the phonetic transcription of the further constituent” (col. 14, lines 23-56).

As per claim 2, Lin teaches, “wherein the out-of-vocabulary (OOV) treatment for phonetic transcription of the further constituent is performed as a function of the phonetic transcription of the subword” (Fig. 3, element 20).

As per claim 3, Lin teaches, "wherein the given word has at least first and second subwords registered in the database, a search is made for both the first and second subwords in the database, a phonetic transcription is selected from the database for both the first and second subwords, and the phonetic transcription of the first and second subwords and the phonetic transcription of the further constituent are combined" (Fig. 3, elements 30 and 31).

As per claim 4, Lin teaches, "wherein the further constituent in the given word is arranged between the first subword and the second subword, and the out-of-vocabulary (OOV) treatment for phonetic transcription of the further constituent is performed as a function of the phonetic transcription of the first subword and the phonetic transcription of the second subword" (Fig. 3, elements 30, 31 and 20).

As per claim 5, Lin teaches, "wherein the searching for subwords in the database is pedormed by searching for subwords which have a prescribed minimum length" (col. 7, lines 24-42).

As per claim 6, Lin teaches, "wherein if a plurality of subwords are found for the same word part, the longest subword is selected therefrom" (col. 11, lines 12-34).

As per claim 8, Lin teaches, "wherein the out-of-vocabulary (OOV) treatment for phonetic transcription of the further constituent is performed by a rule-based method" (Fig. 3, element 27).

As per claim 9, Lin teaches, "wherein the subword is found in a first database, and the out-of-vocabulary (OOV) treatment for phonetic transcription of the further constituent is performed by a second database which contains the phonetic

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transcription of filling particles normally used in the case of composite words" (Fig. 3, element 30, 31 and 32).

As per claim 10-14 and 18, they are interpreted and thus rejected for the same reasons set forth in the rejection of claims 1-6 and 9-10.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 6,076,060) as applied to claims 1 and 14 above, and further in view of Karaali et al. (US 5,913,194).

As per claims 7 and 15, Lin does not explicitly teach, phonetic transcription further performed by a neuron network. However, Karaali teaches, phonetic transcription performed by a neuron network (Abstract). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to use neural network because Karaali teaches his invention reduce size of the neural network without substantial degradation in the quality of the generated synthetic speech (col. 2, lines 8-12).

As per claim 16, Lin teaches, "wherein the out-of-vocabulary (OOV) treatment for phonetic transcription of the further constituent is performed by a rule-based method" (Fig. 3, element 27).

As per claim 17, Lin teaches, "wherein the subwords are found in a first database, and the out-of-vocabulary treatment for phonetic transcription of the further constituent is performed by a second database which contains the phonetic transcription of filling particles used in the case of composite words" (Fig. 3, elements 30, 31, 32 and 20).

#### ***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Abul K. Azad** whose telephone number is **(703) 305-3838**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richemond Dorvil**, can be reached at **(703) 305-9645**.

Any response to this action should be mailed to:

**Commissioner for Patents**

**P.O. Box 1450**

**Alexandria, VA 22313-1450**

Or faxed to:

**(703) 872-9314**

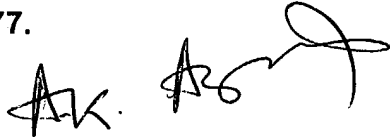
(For informal or draft communications, please label "PROPOSED" or "DRAFT")



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Hand-delivered responses should be brought to 2121 Crystal Drive, Arlington,  
VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should  
be directed to the Technology Center's Customer Service Office at telephone number  
**(703) 306-0377.**

A handwritten signature in black ink, appearing to read 'AK. Azad', with a large, stylized flourish at the end.

Abul K. Azad

December 23, 2004